

What is claimed is:

1. A device for supplying uninterruptible power, said  
5 device having  
input connections (90, 91) for connection to a primary  
power supply device (230),  
connections (190, 191) for connecting a standby power  
source (60),  
10 first output connections (100, 101) for connecting a  
load (220),  
a device (20) for decoupling the input connections (90,  
91) from the first output connections (100, 101) in the  
event of a fault in the primary power supply device  
15 (230),  
a first controllable switching device (40) for  
connecting the standby power source (60) to the first  
output connections (100, 101) in a controlled manner in  
the event of a fault in the primary power supply device,  
20 a control device (31) which is assigned to the first  
controllable switching device (40),  
characterized in that  
the first controllable switching device (40) has a power  
transistor (41, 42) which can be rapidly switched,  
25 a monitoring device (30) being provided for the purpose  
of monitoring the output current flowing through the  
power transistor (41, 42) which can be rapidly switched,  
and in that  
the control device (31) is designed to pulse-width-  
30 modulate the rapid power transistor (41, 42) on the  
basis of the current being monitored in order to limit  
the current which can be provided by the standby power  
source (60).

2. The device for supplying uninterruptible power as claimed in claim 1,  
characterized in that  
5 the standby power source (60) is rechargeable.
3. The device for supplying uninterruptible power as claimed in claim 2,  
characterized in that  
10 a device (70) for blocking a current, which is provided by the primary power supply device (230), to the standby power source (60) is provided in series with the rapid power transistor (41, 42).
- 15 4. The device for supplying uninterruptible power as claimed in claim 2 or 3,  
characterized by  
a smoothing capacitor (80) which is connected between  
the first output connections (100, 101).  
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5. The device for supplying uninterruptible power as claimed in one of claims 2 to 4,  
characterized in that  
a charging device (50) which can be controlled by the  
25 control device (31) is connected between the chargeable standby power source (60) and the input connections (90, 91).
6. The device for supplying uninterruptible power as  
30 claimed in one of claims 1 to 5,  
characterized in that  
a parallel circuit comprising a diode (21) and a second controllable switching device (22) forms the decoupling

device (20), in that the monitoring device (30) is designed to monitor an input voltage, and in that the control device (31) disconnects the second controllable switching device (22) if the input voltage being  
5 monitored signals a fault in the primary power supply device (230).

7. The device for supplying uninterruptible power as claimed in claim 6,  
10 characterized in that the second controllable switching device (22) is a power transistor, in particular a field effect transistor.

8. The device for supplying uninterruptible power as  
15 claimed in one of claims 1 to 7, characterized by a current-limited supply output (130) which is connected in parallel with the first output connections (100, 101).

20 9. The device for supplying uninterruptible power as claimed in claim 8, characterized by at least one third controllable switching device (120)  
25 for connecting and disconnecting at least one state signaling device (200, 210) which can be connected to a respective second output connection (160, 170) that is assigned to the third controllable switching device (120), a third output connection (140) which is assigned  
30 to the third controllable switching device (120) being arranged at a predetermined distance from the current-limited supply output (130).

10. The device for supplying uninterruptible power as  
claimed in claim 9,  
characterized by  
a predefined contact bridge (150) for short-circuiting  
5 the current-limited supply output (130) and the third  
output connection (140).
11. The device for supplying uninterruptible power as  
claimed in claim 9 or 10,  
10 characterized in that the third controllable switching  
device (120) is a relay, in particular a changeover  
relay.
12. A device for supplying uninterruptible power, said  
15 device having  
input connections (90, 91) for connection to a primary  
power supply device (230),  
connections (190, 191) for connecting a standby power  
source (60),  
20 output connections (100, 101) for connecting a load  
(220),  
a device (20) for decoupling the input connections (90,  
91) from the output connections (100, 101) in the event  
of a fault in the primary power supply device (230),  
25 a first controllable switching device (40) for  
connecting the standby power source (60) to the output  
connections (100, 101) in a controlled manner in the  
event of a fault in the primary power supply device  
(230),  
30 a control device (31) which is assigned to the first  
switching device (40),  
characterized in that  
a parallel circuit comprising a diode (21) and a second

controllable switching device (22) forms the decoupling device (20), in that a monitoring device (30) is provided for the purpose of monitoring an input voltage, and in that the control device (31) disconnects the second controllable switching device (22) if the input voltage being monitored signals a fault in the primary power supply device (230).

13. The device for supplying uninterruptible power as claimed in claim 12, characterized in that the second controllable switching device (22) is a power transistor, in particular a field effect transistor.
14. A device for supplying uninterruptible power, said device having input connections (90, 91) for connection to a primary power supply device (230), connections (190, 191) for connecting a standby power source (60), first output connections (100, 101) for connecting a load (220), a device (20) for decoupling the input connections (90, 91) from the output connections (100, 101) in the event of a fault in the primary power supply device (230), a first controllable switching device (40) for connecting the standby power source (60) to the output connections (100, 101) in a controlled manner in the event of a fault in the primary power supply device (230), a control device (31) which is assigned to the first switching device (40), characterized by

a current-limited supply output (130) which is connected in parallel with the first output connections (100, 101).

- 5     15. The device for supplying uninterruptible power as claimed in claim 14, characterized by at least one second controllable switching device (120) for connecting and disconnecting at least one state  
10     signaling device (200, 210) which can be connected to a respective second output connection (160, 170) that is assigned to the second switching device (120, 122), at least one third output connection (140) which is assigned to the second switching device (120, 122) being  
15     arranged at a predetermined distance from the current-limited supply output (130).
16. The device for supplying uninterruptible power as claimed in claim 15,  
20     characterized by a predefined contact bridge (150) for short-circuiting the current-limited supply output (130) and the at least one third output connection (140).
- 25     17. The device for supplying uninterruptible power as claimed in claim 15 or 16, characterized in that the second controllable switching device (120) is a relay, in particular a changeover relay.